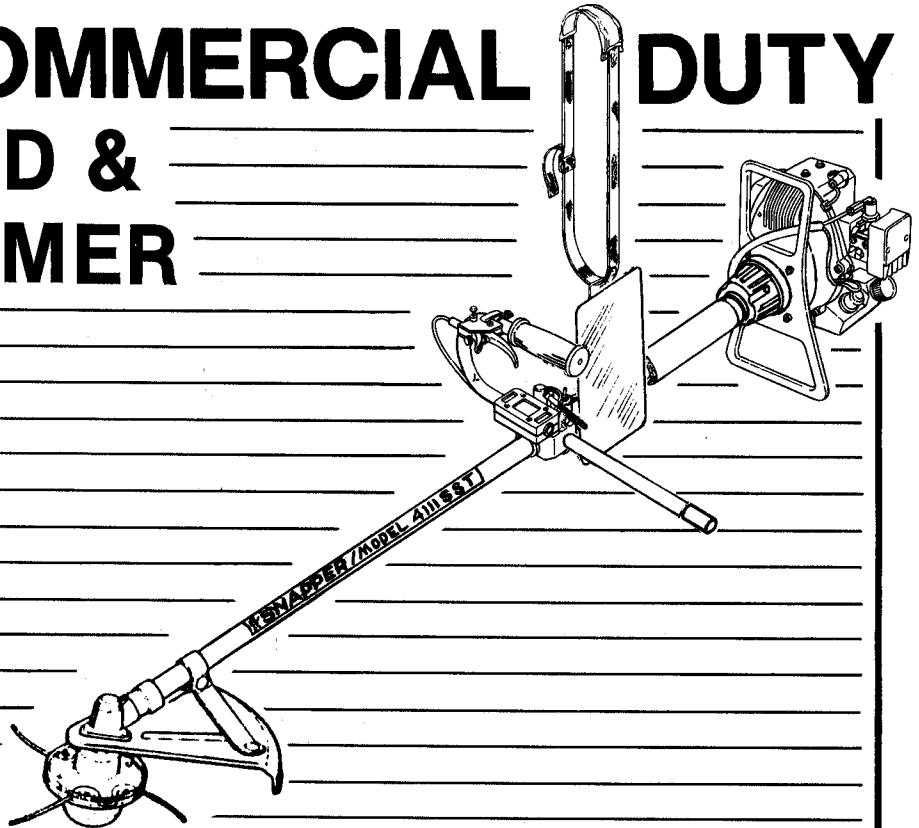


# SNAPPER®

## 4111SST COMMERCIAL DUTY GRASS, WEED & BRUSH TRIMMER



*Thank you for buying a Snapper Product! Before operating your trimmer, read this manual carefully and pay particular attention to the Important Safety Instructions on page two. Remember that trimmers and all power equipment can be dangerous if used improperly and keep in mind that safety requires careful use in accordance with the instructions and -- common sense!*

### GENERAL SPECIFICATIONS

TYPE	AIR COOLED, TWO-CYCLE
DISPLACEMENT	40.6 c.c.
IDLE (DECLUTCH) RPM	2500*
CLUTCH ENGAGE RPM	3300*
FULL OPERATING RPM	7600*
FUEL MIX RATIO	32 to 1
FUEL TANK CAPACITY	30 oz.
SPARK PLUG TYPE	CHAMPION CJ8
SPARK PLUG GAP	.025"
IGNITION TYPE	SOLID STATE
TRIMMER HEAD	FIXED LINE HEAD
TRIM LINE DIAMETER	.130
UNIT WEIGHT (Approx.)	19.5 lbs.

\*Approximate-plus or minus 200 RPM

**SNAPPER POWER EQUIPMENT**

McDonough, GA • 30253



# IMPORTANT SAFETY INSTRUCTIONS

**WARNING:** Failure to comply with the following instructions may result in serious injury to the operator or other persons. The owner of the trimmer must understand these instructions and, furthermore, must allow only persons who understand these instructions to operate the unit. Each person operating the trimmer must be of sound mind and body and must not be under the influence of any substance which might impair vision, dexterity, or judgement. If you have any questions pertaining to your trimmer which your dealer cannot answer to your satisfaction, call or write the Customer Service Department at SNAPPER POWER EQUIPMENT, McDonough, Georgia, 30253. (Phone 404-957-9141).

## TRAINING

1. Read this Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment.
2. DO NOT allow children in yard when trimmer is operated.
3. DO NOT allow pre-teenage children to operate trimmer.
4. Allow only responsible teenagers with mature judgement to operate trimmer and only under close supervision.
5. Keep the area clear of all persons, particularly small children, and pets.

## PREPARATION

1. DO NOT operate trimmer without safety glasses or goggles.
2. Thoroughly inspect the area where the trimmer is to be used and remove all stones, sticks, wire, bones and other objects that could cause injury if thrown at high speeds.
3. Do not operate trimmer when barefoot or wearing open sandals. Always wear substantial footwear and long pants.
4. Never operate trimmer without proper guards, shields or other safety protective devices in place and properly connected. Inspect to determine that these safety devices are installed properly, are in good repair, and operate properly. If the condition or operation of these devices are questionable, they must be repaired or replaced before using the trimmer.
5. Fill gasoline tank before starting engine. Mix in an approved gasoline container. Do not smoke near open gasoline container. Do not fill gasoline tank indoors or when engine is running. Allow engine to cool for at least ten minutes before refilling. Wipe off any spilled gasoline before starting engine. Move away from fueling site before starting engine. Do not run engine indoors.
6. Use trimmer only in daylight or in good artificial light.
7. Never operate trimmer in wet grass. Keep a firm hold on the handle and walk slowly, never run.

8. Operate only where firm footing is assured. DO NOT operate from a ladder or any other place where use of hands would ordinarily be necessary to prevent falls.

## OPERATION

1. Do not overspeed engine.
2. Do not put hands or feet near or under rotating parts while engine is running.
3. Stop or idle engine when crossing gravel drives, walks, or roads, and under any conditions where thrown objects might be a hazard.
4. After striking a foreign object or if unit vibrates abnormally, stop the engine, disconnect and secure spark plug wire. Inspect the unit for any damage and repair the damage.
5. Stop engine before leaving unit.
6. Before cleaning, repairing or inspecting, make certain head or blade has stopped. Disconnect and secure spark plug wire away from plug to prevent accidental starting.
7. When using blade, hold unit firmly and wear harness to prevent loss of control due to blade bounce upon contact with hidden solid objects.

## MAINTENANCE AND STORAGE

1. Keep all nuts, bolts, and screws tight to be sure unit is in safe operating condition.
2. Never store unit with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
3. To reduce fire hazard, keep unit free of grass, leaves or excessive grease.
4. Have your trimmer inspected and serviced each year by an authorized Snapper dealer. Determine if any additional devices are available which might upgrade the safety of your trimmer.
5. Use only factory specified Snapper attachments, accessories and fasteners.

# OPERATING INSTRUCTIONS

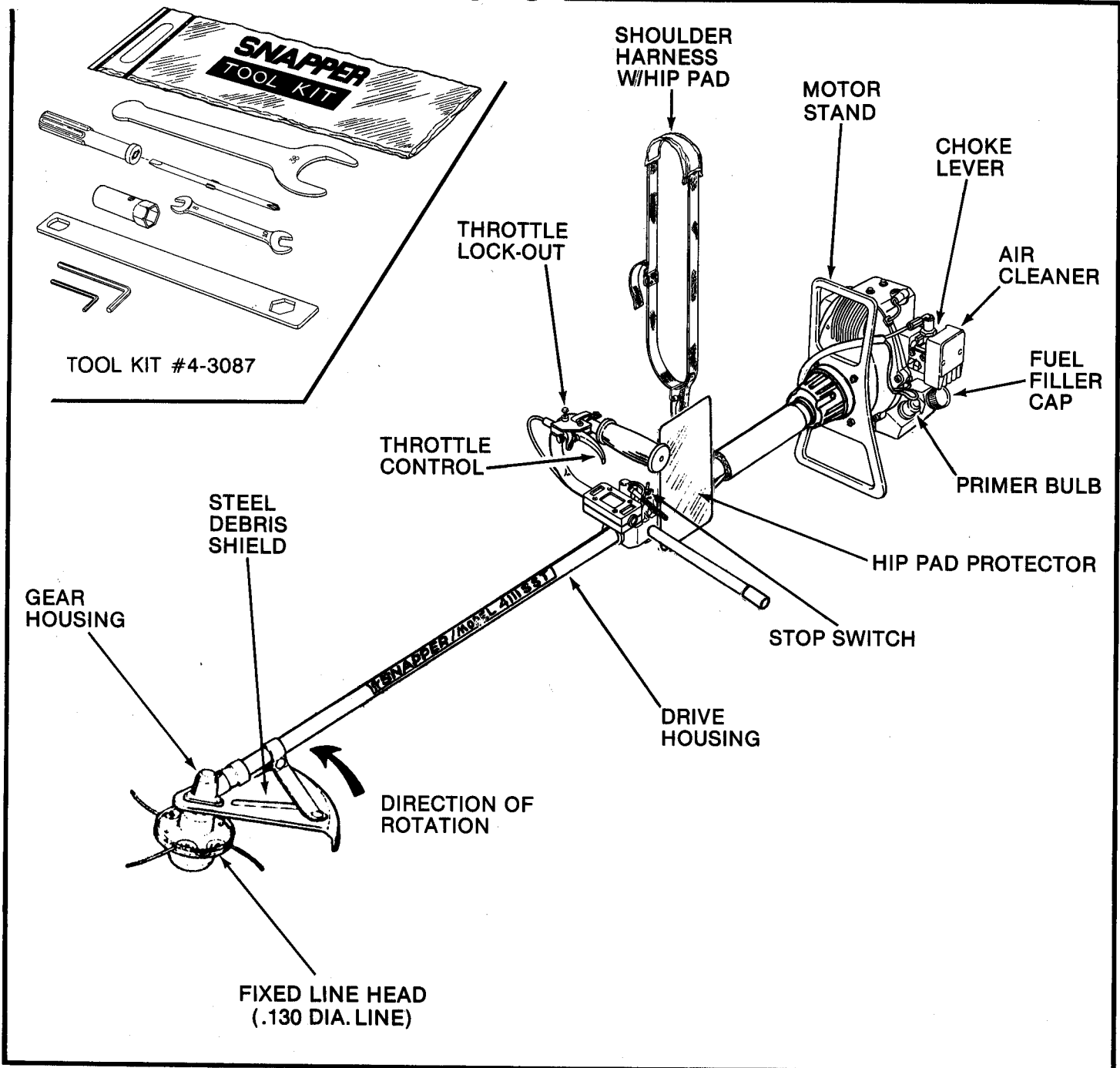


FIG. 1 - LOCATION OF CONTROLS & OTHER FEATURES

## PRE-MIX FUEL

For proper lubrication, the engine must operate on an exact mixture of gasoline and 2 cycle air-cooled engine oil. Use a 32 to 1 mixture. Use a good quality regular grade leaded or unleaded gasoline and an SAE 40 weight 2-cycle air-cooled engine oil. The 410 trimmer engine is also designed to run on gasohol fuel. Do not use the special 50:1 ratio oils. The 32 to 1 ratio equals 4 ounces of oil to each gallon (U.S. Standard) of gasoline, (or 20 oz. to 5 gallons gasoline). Refer to the following chart for correct 32 to 1 ratio mixtures:

### 32:1 RATIO - U.S. STANDARD FLUID MEASUREMENTS

GALLONS GASOLINE*	1	2	3	4	5
OUNCES 2-CYCLE OIL	4	8	12	16	20

Pre-Mix the fuel in an approved container while observing all safety precautions relating to handling of fuel. Add some gasoline to the container first then the oil. Close the container and shake vigorously to thoroughly mix the fuel; open the container and add the remaining amount of gasoline to correct the ratio. Shake the container to mix the fuel each time before filling the trimmer fuel tank. **DO NOT** add fuel to hot trimmer-allow engine to cool.

## START-STOP PROCEDURE

Become thoroughly familiar with the location and function of all controls before operating your trimmer. Be prepared to stop quickly in the event of an emergency. The engine is stopped by flipping the toggle switch at the base of the handle to STOP position. Rotation of the trimmer head or cutting blade is stopped by releasing the clutch control handle which allows the engine speed to drop below clutch engagement speed of approximately 3000 RPM. After filling the fuel tank as described in the foregoing, use the following procedure to start the engine and to operate the unit.

1. Place the trimmer on ground or other flat surface with weight firmly balanced on engine stand and front shield.

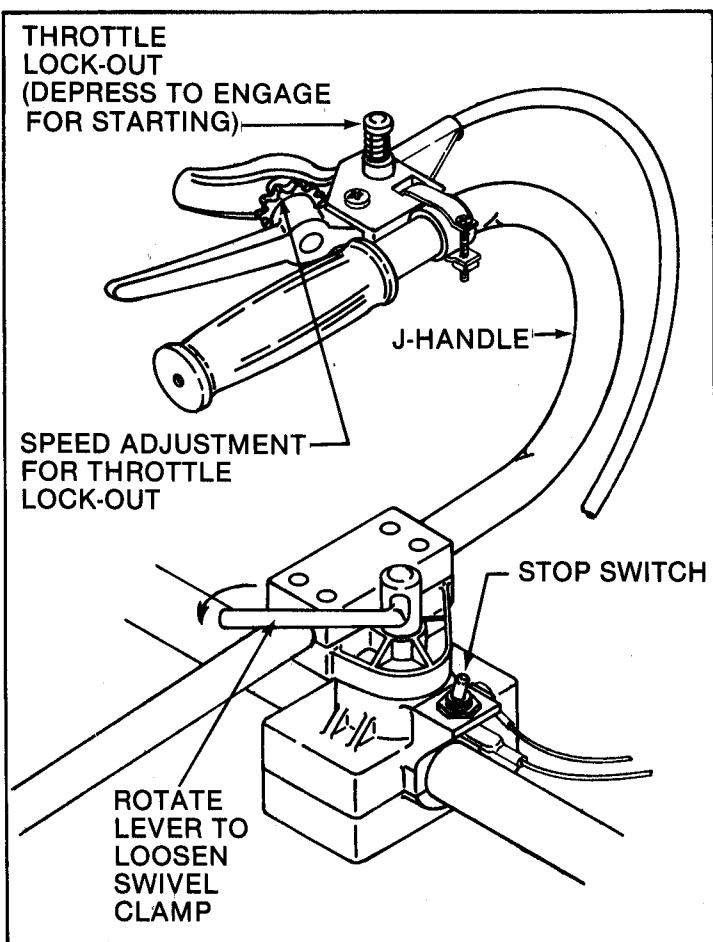


FIG. 2 - LOCATION OF CONTROLS

2. Squeeze clutch control handle, depress pin to lock in starting speed. Caution: Clutch will engage at start speed. Make sure cutting head or blade is not touching the ground.

3. While holding tickler valve up (see figure 3) pump the primer bulb on fuel tank until fuel starts flowing out of the overflow tube. Continue pumping until no air bubbles are evident in the tube. NOTE: Make sure the tickler valve is held up while priming. If primed while in down position, carburetor flooding and hard starting will occur. No priming will be needed with warm engine.

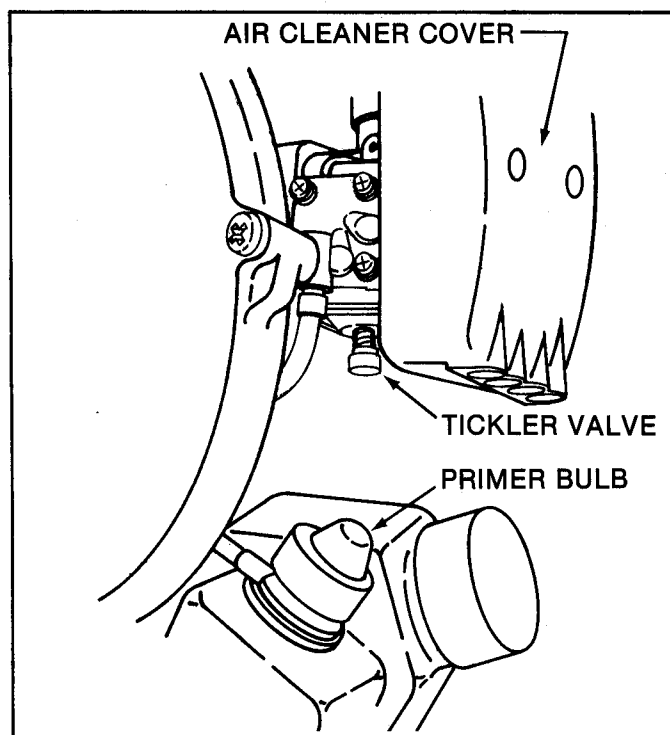


FIG. 3 - TICKLER/PRIMER BULB LOCATION

4. Move the choke lever up to full CHOKE position. No choking will be needed with warm engine.

5. Pull the rope start handle out in full strokes until the engine starts. Allow brief warm up period at full throttle then push lockout pin on throttle control to allow speed to return to idle.

6. Allow few more moments at idle to warm up then move choke lever downward to OPEN position.

7. Lift the unit, slip into harness and begin operation.

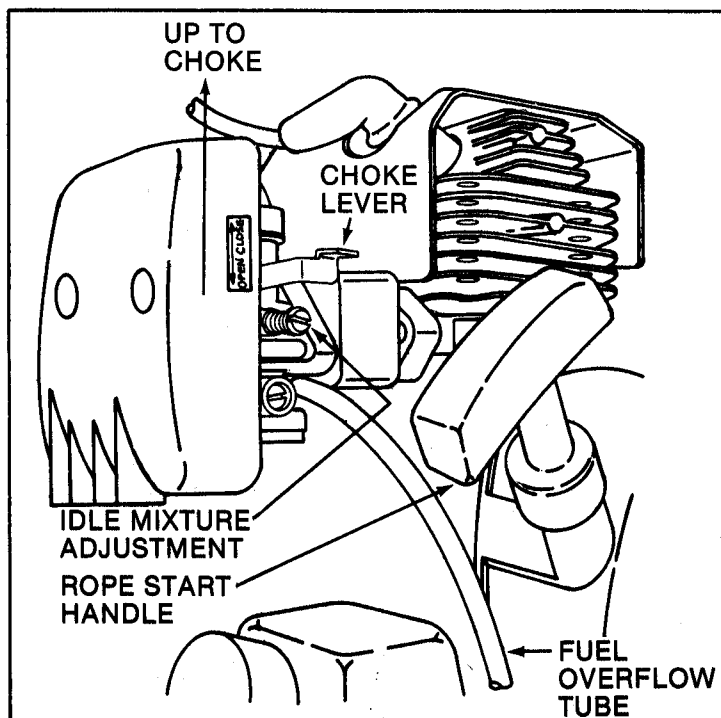


FIG. 4 - CARBURETOR CONTROLS

## OPERATION (Continued)

### TRIMMING OPERATION

The model 4111 is furnished with a fixed line head. When fitted with the trimmer head, use the machine as follows, remembering to wear eye protection, substantial footwear and clothing to protect against injury from thrown objects. Also wear the harness for better control and comfort.

**TRIMMING PROCEDURE:** Always swing the trimmer head slowly from the right to the left in a semi-circular motion. Hold the head at about a 30° angle to the ground to trim around trees, walks etc. Allow the tips of the line to do the trimming. For mowing or sweeping operation, hold the head so that the line is parallel to the ground. Keep the head above the ground to avoid scalping and unnecessary wear of the trimmer head.

**OPERATIONAL WARNING:** It is normal for the gear housing to become very warm after extended periods of operation. While the temperature should not normally become hot enough to cause burns, be aware that the housing could reach levels very uncomfortable to the touch.

### BLADE OPERATION: (OPTIONAL BRUSH & SAPLING KIT)

Use extreme caution when operating the unit as weed cutter with the blade installed in place of the trimmer head. Never use a blade with cracks or chips and always wear safety goggles, safety shoes and use the harness supplied in kit to help maintain control. Refer to the service section for blade installation and important sharpening instructions.

**CUTTING PROCEDURE:** Cut in a semi-circular motion, sweeping slowly from the right to the left. Do not attempt to cut solid vines, small trees and keep away from hard objects such as pipes, metal fence, posts, rocks etc. The blade will tend to bounce violently away from solid objects causing the operator to lose balance and possible control when bounce occurs. Check the blade frequently with unit stopped for evidence of cracking. Replace damaged blade.

# SERVICE

### SERVICE ASSISTANCE & PARTS

To retain the original quality of your trimmer, be sure to use only genuine SNAPPER replacement parts. This is of particular importance when the blades, trimmer heads and retaining hardware are involved—do not use substitutes! Most routine services covered in this section can be performed quickly and easily using the tools provided in the trimmer tool kit. Contact your SNAPPER dealer for service assistance and replacement parts. The information in the parts section (furnished with your trimmer) is subject to change. Complete, up-to-date parts information is available from your dealer. For the nearest SNAPPER dealer, check the yellow pages of your telephone directory under the heading LAWN-MOWERS.

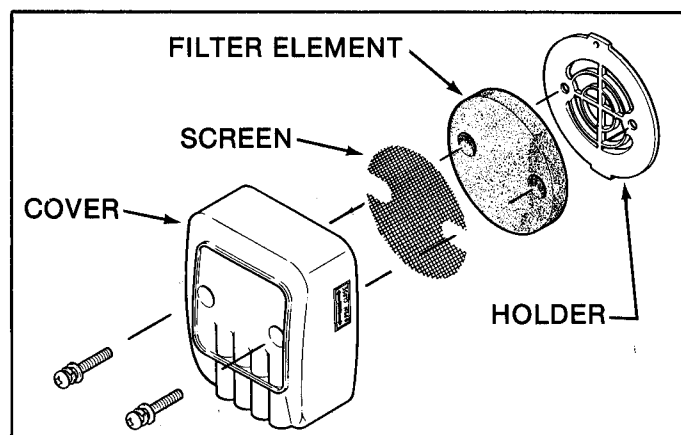


FIG. 5 - AIR CLEANER SERVICE

### AIR CLEANER-SERVICE EVERY 25 HOURS

Every 25 hours, or more frequently if operating under extremely dusty or dirty conditions, service the air cleaner as follows. Replace any parts found to be damaged.

1. Use the Phillips head screwdriver provided in tool kit to remove the two air cleaner cover retaining screws.

2. Remove the cover. The element, holder and screen will normally stay inside the recess in the air cleaner cover. Carefully pry the holder out of the recess then remove the filter element.

3. Wash the element in solution of dishwashing detergent and water, squeeze dry then lubricate the element with small amount of SAE 30 weight engine oil then squeeze element again to evenly distribute the oil.

4. Wash the cover and metal screen in position in dishwashing detergent solution before reinstalling screen, element and holder in the recess in cover.

**NOTE:** Make sure flat surface of holder is facing toward element—the side with the raised ridge or ring must be outside to fit into the carburetor opening otherwise unfiltered air can enter carburetor.

5. Reinstall serviced air cleaner assembly on carburetor. Make sure air intake passages face downward.

## SERVICE (Continued)

### SPARK PLUG-SERVICE

The spark plug on a 2-cycle engine quickly become oil fouled especially if the engine is run at low speeds too long. The electrodes also tend to become carbon fouled. Check the spark plug frequently especially if the engine fails to start or is difficult to start. Use the spark plug wrench supplied in the tool kit to remove the plug. Keep the electrodes clean and the gap set at .025". Use a Champion CJ8 or equivalent spark plug.

### GEAR HOUSING-SERVICE EVERY 50 HRS.

Keep hands away from the gear housing after extended periods of operation as it gets very warm. After every 50 hours of operation, grease through fitting with a good quality lithium base #2 multi-purpose grease.

### DRIVE SHAFT-CLUTCH

This model features a heavy duty solid steel drive shaft which runs in five bushings inside the main drive tube. The drive shaft does not normally require service on a regular basis, however, if a rattling noise is detected after extended use, this could indicate bushing and or shaft wear. In this event, return the unit to a SNAPPER dealer for repair. A slipping clutch may be caused by excessive wear or oil on the clutch drum. Return the unit to your SNAPPER dealer for clutch repair.

### TRIMMER HEAD & LINE

The model 4111 trimmer is furnished with a heavy duty fixed line head. The line can be replaced when worn. It is not necessary to remove the head to replace line. Do not substitute line - use only SNAPPER .130 diameter line. Never install metal line in the SNAPPER fixed line head!

**HEAD INSTALLATION:** Install head on the output shaft as follows. Place the top holder on the output shaft with the "recessed" area AGAINST the underside of the gear housing. The bottom holder is then placed on the shaft with the recess against the top holder. Next, locate the head on the remaining exposed shaft and secure by hand tightening the arbor bolt (with wear pad installed) on the threads of shaft. Refer to FIG. 6. Then secure the assembly by holding the bottom holder (on the flats) with the 38 mm wrench (provided) while tightening the arbor bolt against the output shaft with a 13/16" socket wrench (spark plug wrench).

**NOTE:** When installing a blade on the output shaft, the top and bottom holders are used in a different sequence - also, a lock nut is provided with the optional blade. Refer to FIG. 7.

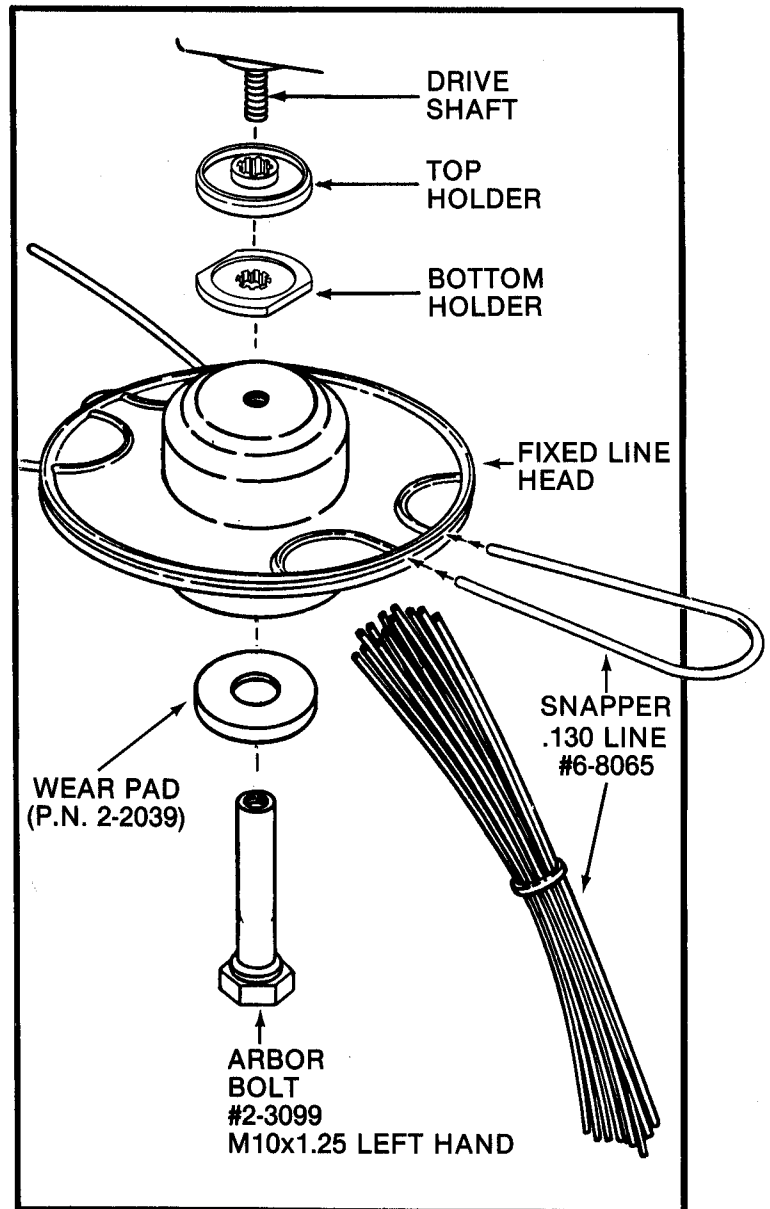


FIG. 6 - FIXED LINE HEAD

**LINE REPLACEMENT:** Before handling the fixed line head, be sure the engine is NOT running and the gear head is cool to the touch.

Remove (by hand or with pliers) the remaining used line from the four formed "U" shaped channels and insert two new lines into the channels.

The lines should be approximately 17" long from tip to tip after installation with all four equal in length.

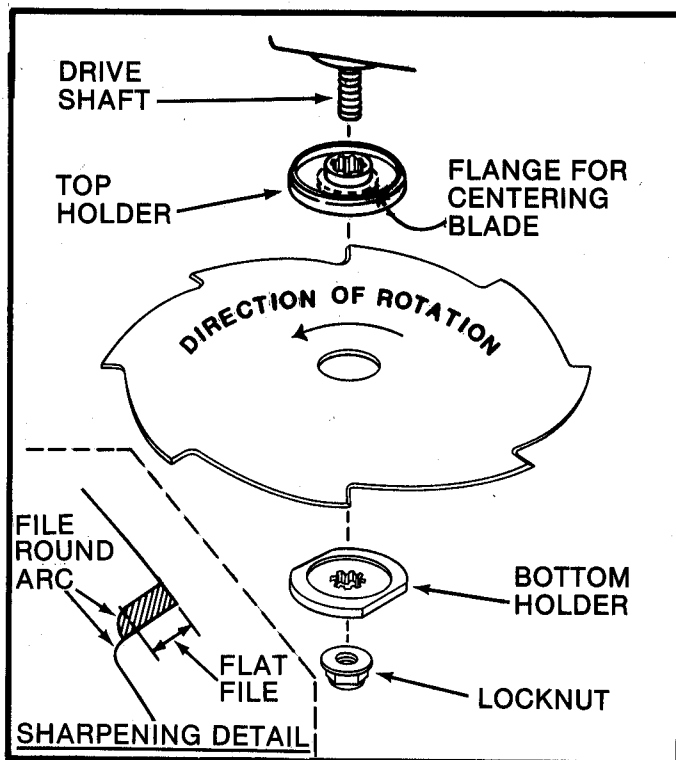


FIG. 7 - CUTTING BLADE INSTALLATION

## CUTTING BLADE

To install any of the optional weed cutting blades, remove the head as described in the foregoing instructions and install blade as follows:

1. Position the centering flange of the top holder into hole of the blade. Make sure cutting edges are positioned as shown in figure 7.
2. Position blade and top holder on output shaft and install bottom holder with flat surface up as shown, start lock nut on output shaft and hold flats of bottom holder with spanner while securely tightening the locknut. Refer to operational section for special instructions on using blades.

**CAUTION:** Never use blades other than genuine SNAPPER replacement blades. Differences such as mounting hole diameter and material hardness could be dangerous. Also, never attempt to install a blade with the trimmer head installed. Use the specific retaining hardware in sequence shown.

**BLADE SHARPENING PROCEDURE:** Check blade for nicks and cracks and discard if any are found! Sharpen blade cutting edges as shown in figure 7. Be sure to maintain radius at base of tooth to minimize chances of cracks developing in this particular area of the blade.

## SPARK ARRESTOR MUFFLER

The muffler on the 4111SST engine includes a built-in spark arrestor. The arrestor functions to prevent sparks generated in the combustion process within the engine from being discharged along with the exhaust gases. This fire prevention device is required by many government agencies for gasoline engine powered products for use in federal or state forest, brush and grass lands. Without proper service, the arrestor screen will quickly become clogged with carbon causing power loss and poor performance.

**SERVICE** arrestor after each 5 hours of operation. After muffler parts have cooled down, take the cover off the muffler and remove the spark arrestor as shown in figure 8. Clean the arrestor screen with a wire brush. Check to make sure screen has not deteriorated to the point where sparks could escape. Replace arrestor and or gasket as needed. Reinstall components in sequence shown. **WARNING:** Never touch hot muffler or cover!

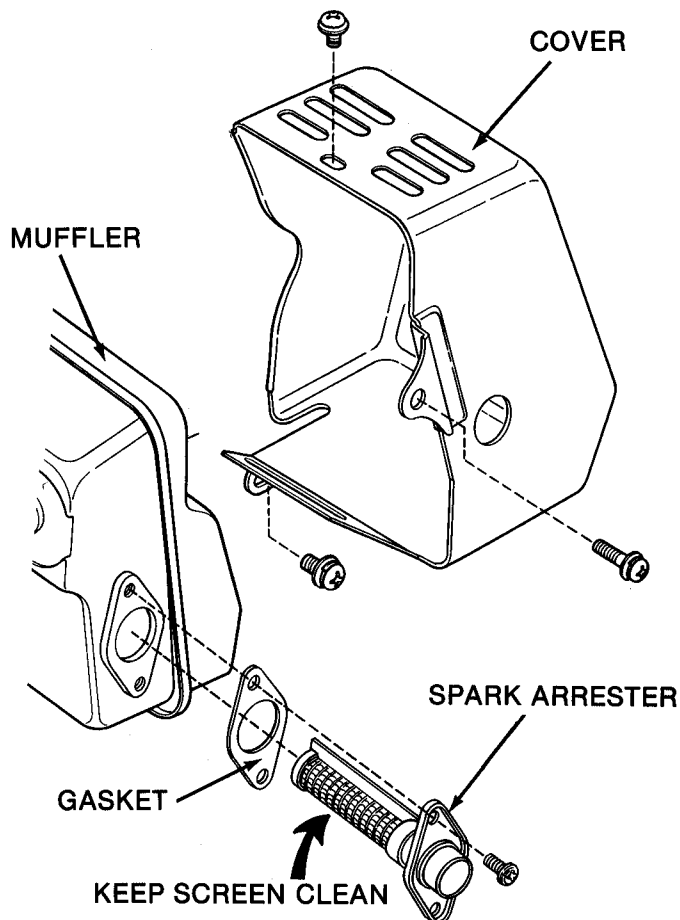


FIG. 8 - SPARK ARRESTOR DETAILS

## FUEL SYSTEM SERVICE

## SNAPPER MODEL 4111SST TRIMMERS

An all position diaphragm type carburetor is used on the model 4111. The carburetor has a fixed main jet but has adjustable idle speed and idle mixture adjustments. Do not tamper with these adjustments. If the engine will not start, stalls at idle or stalls under rapid acceleration, and the cause is not due to the air cleaner or muffler, or fouled plug readjust the carburetor as follows. Refer to figure 8 for adjustment points.

1. With engine stopped, turn the idle mixture screw to the right until the needle bottoms lightly--do not force it closed. Turn it to the left 1-1/2 turns.
2. Start the engine and allow time for it to warm up. Check idle speed operation. If the engine stalls, turn the idle speed to the right 1/8 turn at a time until it idles properly. (NOTE: The trimmer head or blade should not move at idle speed.)
3. Test acceleration. If the engine stumbles or stalls, turn the idle mixture screw to the left 1/8 turn at a time until proper acceleration is achieved. Recheck idle speed setting and readjust as needed.

**NOTE:** Keep the carburetor free of gum formation by using only clean fresh fuel and a fuel stabilizer such as "STA-BIL"® or an equivalent. Whenever possible, drain the fuel or run until the fuel tank is dry, particularly when the trimmer is to be stored for any length of time.

### OFF-SEASON STORAGE

Before storing the unit during the off-season or for any period where the unit will not be used for 30 days or more, preserve the unit by taking the following steps:

1. Run the engine dry of fuel or drain all fuel from the tank. Again, the use of a fuel stabilizer will greatly help in re-starting the engine after storage.
2. Remove the spark plug, squirt small amount of 2-cycle engine oil into cylinder, pull rope starter several times and reinstall the plug.
3. Place dust cover over unit and store in high area out of reach of children and dry shed protected from weather.

## MANUFACTURER'S 2 YEAR LIMITED WARRANTY

For two (2) years from purchase date for the original purchaser's residential, non-commercial use [ninety (90) days from purchase date for the original purchaser's commercial, rental, or other non-residential use], and for 3 years on the ignition module, SNAPPER POWER EQUIPMENT, through any SNAPPER dealer will replace, free of charge, any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

All transportation cost incurred by the purchaser in submitting material to a SNAPPER dealer for replacement under this warranty must be borne by the purchaser.

This warranty does not apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond our control.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two (2) years from purchase date for the original purchaser's residential, non-commercial use [ninety (90) days from purchase for the original purchaser's commercial, rental or other non-residential use], and to the extent permitted by law any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages, under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**WARNING:** THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.

**IMPORTANT:** Please fill out the attached SNAPPER Product Registration Card immediately and mail to: SNAPPER POWER EQUIPMENT, McDONOUGH, GEORGIA 30253.

**SNAPPER POWER EQUIPMENT**  
McDonough, Georgia 30253  
**A Division of Fuqua Industries**

